

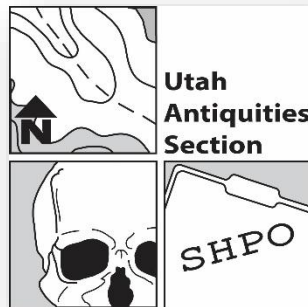
State of Utah

# Archaeological Compliance Guidance

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Utah State Historic Preservation Office  
&  
Antiquities Section

3/18/2016



This document is a summary of accepted Utah standards for archaeological compliance and data management. Much of this material mirrors the Bureau of Land Management's manual for cultural resources in Utah. Individual state and federal agencies may, and often do, establish their own internal guidelines for cultural compliance, and it is the responsibility of the consultant to meet and exceed those standards, which will likely be more exacting than those described within.

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## **Chapter 1: Introduction**

This guidance document is created in hopes of collating all the expectations of the Utah State Historic Preservation Office (UTSHPO) for completing an expeditious and adequate review of cultural resources compliance projects. The UTSHPO recognizes that in both state and federal law, the agencies hold the most authority in setting standards and expectations, and this document is not meant to supersede their instruction but to merely augment and support their direction. Any questions by consultants and proponents on any guidance in this document should be routed first through the responsible state or federal agency, or in some cases directly to the Utah Division of State History's Antiquities Section and the Utah State Historic Preservation Office Staff. UTSHPO hopes this document will assist agencies, proponents, and cultural resource practitioners to understand the basics of meeting compliance with the UTSHPO.

### **Staff**

For projects with an archaeological component needing cultural resource review please contact Dr. Chris Merritt (Deputy SHPO and Antiquities Section coordinator). For questions on Archaeological Records, please use the dedicated email address [archrecords@utah.gov](mailto:archrecords@utah.gov) and Arie Leeflang (Archaeological Records Manager), Deb Miller (Assistant Records Manager) or Tessie Burningham (Archaeological Records Technician) will respond to your query. For general questions on the status of cases or to obtain copies of old compliance documentation please contact Janice Reed-Campbell ([jreedcam@utah.gov](mailto:jreedcam@utah.gov)).

For projects that are disturbing the ground or may affect archaeological resources:

[Chris Merritt](#)

300 S. Rio Grande Street  
Salt Lake City, Utah 84101  
Phone: 801-245-7263 or 801-245-7241  
Fax: 801-533-3503

For projects affecting historic structures:

[Chris Hansen](#)

300 S. Rio Grande Street  
Salt Lake City, Utah 84101  
Phone: 801-245-7239  
Fax: 801-533-3503

For UDOT-related projects affecting historic structures:

[Cory Jensen](#)

300 S. Rio Grande Street  
Salt Lake City, Utah 84101  
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## **Chapter 2: Consultation Process**

The UTSHPO reviews projects under two authorities, Section 106 of the National Historic Preservation Act (NHPA) codified in 36CFR800 for federal undertakings and the Utah Code Annotated 9-8-404 for state undertakings. Both processes are similar to each other, with the only major difference being how adverse effects are resolved. Federal and State authorities feel that historic and archaeological resources are important to the history of our communities and need to be taken into account during projects. The role of the UTSHPO is to provide technical assistance and advice to communities, individuals and agencies and to provide a formal review for state and federal undertakings. UTSHPO lives by the motto “early and often” consultation for all projects; the staff are open to discussions and queries well in advance of a project being submitted to the office for review. What follows are some basic guidance on the process.

### **What Is an Undertaking?**

An “undertaking” is the basic starting point to assess compliance with the relevant state or federal cultural resources compliance law. According to 36CFR800.16(y) a federal agency is responsible to comply with the provisions of Section 106 of the NHPA when:

any project, activity, or program [is] funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; those requiring a Federal permit, license or approval; and those subject to State or local regulation administered pursuant to a delegation or approval by a Federal agency.

Alternately, UCA 9-8-404(1)(a) states that “before expending any state funds or approving any undertaking,” each state agency will take into account its actions on historic properties. If there is a question on whether a proposed action falls under either state or federal law, please contact the UTSHPO.

### **Who Consults?**

Under both state and federal cultural resource laws, each agency is responsible for completing their compliance obligations. Proponents, archaeological consultants, individuals, or state agencies receiving federal monies are not the legally responsible party for completing the process nor are allowed to directly consult with the UTSHPO, unless there is a preexisting agreement delegating that responsibility. All formal consultation communications with the UTSHPO should come from a responsible agency and should be signed by the Agency Official, or the person with authority to sign agreements and take responsibility for actions. If there is a question on which agency or who within an agency is the signature responsibility, please contact the UTSHPO. Formal communications from anyone other than the Agency and Agency Official will be returned unless there is an agreement otherwise.

### **Defining the Area of Potential Effects**

As described in 36CFR800.16(d), an Area of Potential Effects, or APE, is “the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties...”. When considering the undertaking’s effects on cultural resources, it is critical to think in three dimensions. For example, a housing project may be on a vacant lot with no standing

architecture, but will require excavation of several feet of soil and possibly encounter subsurface archaeological materials. There may also be an extension of utilities into the property or staging areas for equipment, etc. An agency is responsible for defining all aspects of a project into an area of potential effects (APE) in consultation. However, per 36CFR800.4(g), multiple steps in the process could be condensed to expedite the process “as long as the consulting parties and the public have an adequate opportunity to express their views”. There is no clear equivalent to this process in UCA 9-8-404, but UTSHPO urges state agencies to discuss the APE with interested parties.

Extending beyond a physical effect, federal law requires taking into account the project’s auditory, atmospheric and visual effects as well. For example, installation of a high-voltage transmission line through the grounds of a historic monastery would not have a physical consequence to any standing buildings, but could potentially affect the overall setting and feeling of the site with visual effects and through the humming and crackling.

Agencies must consult the UTSHPO for defining the APE of an undertaking. For simple projects this can oftentimes be rolled into the final submission packet. For complex undertakings, agencies are urged to contact the UTSHPO before identification efforts begin.

## **Eligibility & Effect**

After defining the APE, the Agency is responsible to conduct identification efforts (See Chapter 3 and 4 for more details) to determine if cultural resources are present within the APE. More specifically, both state and federal law requires that agencies take into account the project’s effects on ‘historic properties,’ or those buildings, structures, districts, sites, or objects that are eligible for, or listed in, the National Register of Historic Places (NRHP). After completing identification efforts, there could likely be a number of cultural resources documented but not all are “historic properties” as some will likely be determined “Not Eligible.” An agency is responsible for reviewing the identified resources, determining their status for the NRHP, and asking for the UTSHPO’s concurrence with those determinations. There are numerous guidance documents, bulletins, and training courses available for judging the eligibility of cultural resources and how to understand the effect of an undertaking on those resources, so only the minimum will be covered in this section.

Both prehistoric and historic-period archaeological historic resources should be judged by all four of the NRHP criteria at the local, state, and national levels of significance. See the [National Park Service’s Bulletin 15](#) for the NRHP criteria and its application.

After determining the nature of the resources and historic properties within the APE, the agency is responsible for determining the effect of the project on those properties. There is significant variability with projects and effect determinations, and any questions on thresholds should be considered through dealing with the UTSHPO and other consulting parties through consultation. Avoidance of historic properties is always the preferred option, but we realize that it is not always feasible.

## Inadvertent Discoveries

If background research (historic map reviews, oral histories, findings from previous projects, etc.) or other information suggests a potential to encounter previously undocumented subsurface archaeological deposits during an undertaking, the UTSHPO highly encourages the Agency to include a discovery clause to all contracts. An example discovery clause (see below) should be included in all Scopes of Work and contracts for State undertakings, so that all parties are aware of the potential:

Discovery Clause: If during ground disturbing activity, contractors encounter any subsurface archaeological deposits including, but not limited to, prehistoric artifacts or features (pithouses, charcoal staining from hearths, etc.), human remains, historic building foundations or walls, outhouse/privies, or dense trash deposits, work must be halted within 50' of the discovery and notification made to the responsible Agency. The Agency will continue to halt work until an assessment of the discovery is completed by the agency or a State or Federally permitted archaeologist. If the discovery is considered a significant, or a National Register Eligible property, the agency will notify the Utah State Historic Preservation Office to coordinate the mitigation of the discovery.

The training of private excavators or building contractors on archaeological discovery potential is well-worth the investment in time and effort to avoid inadvertent adverse effects.

## What Is in the Agency Letter?

An agency letter is the formal statement, or determination, of the responsible Agency Official (usually a Director or above) regarding a project's effects on cultural resources. Currently, only the Federal Communications Commission (FCC) has authority to delegate their Section 106 duties to corporations or individuals. Thus, other than an FCC case, all agency letters received by UTSHPO for review should be from a designated Federal Agency Official, as described in 36CFR800.2(a), or from a responsible state agency for undertakings under UCA9-8-404. UTSHPO does not review requests for concurrence on determinations of effect and eligibility for any individuals or organizations that do not meet those specifications. Any report and letter received from an unrecognized Federal or State Agency Official will be returned.

The agency letter should clearly include, at the minimum, the lead agency, associated agencies and other pertinent consulting parties; a description of the undertaking; its location and APE; inventory methods and results; and a formal determination of effect and eligibility, as necessary. For ease of review, the UTSHPO requests that all sites and their eligibilities be included in a single table within the agency letter. Finally, we require a map to be included with the letter that illustrates the APE and its relative location in the state, generally with a topographic map background. Insufficient quality maps may result in the consultation package being returned or a request for clarification.

Many individuals confuse the Utah SHPO Cover Page with the agency letter. These are distinctly different legal documents that live in different record series. The agency letter should summarize all pertinent details of the project and the eligibilities and effects, as this document is the legal statement by the Agency Official pursuant to cultural resource laws and lives in the appropriate case file. A Utah

SHPO Cover Sheet is an internal tracking form for use as a data quality tool to ensure the Records Staff receive all pertinent and required information and lives with the report, not the case file.

If you are responding to a letter from UTSHPO regarding a previously submitted report, please ensure that you include the Section 106 Case # that was included on our correspondence. It will appear as Case # Year-Number, (e.g. Case #: 13-0100). This is how UTSHPO tracks correspondence regarding compliance projects, and failure to include this information leads to our staff trying to find the right project using other information, such as project title, etc. The more detail you can provide, the better we can respond to your queries. If you have an internal tracking name or a number that you want us to reference in response letters, please include that information and clearly call it out. See the following page for an example agency letter (If more examples are needed, please email a SHPO staff member).

### **Checking Status of Cases?**

The UTSHPO has a 30-day statutory turnaround time for reviewing consultation packets, and this clock begins when the complete package arrives at our office. Generally, the UTSHPO aspires to complete all reviews within a 15-day turnaround time, but that is not always possible with large and complex projects. It is highly unlikely that constantly checking in the status of your project with UTSHPO reviewers will aid in its expeditious review and is not helpful. In an average year, the UTSHPO reviews approximately 1,700 projects, some with multiple requests for comments. We are responsive to the needs of agencies and will do our best to move through the process as quickly as possible. Providing all the pertinent information in the format, quality, and organization outlined in this document will assist in a timely review for your project.

If you wish to check on the status of a project that was recently submitted, or if you are looking for past case work to clean up or to clarify past undertakings, please contact Janice Reed-Campbell ([jreedcam@utah.gov](mailto:jreedcam@utah.gov)) with the name of the project, project number, county, agency, and case number if it's been previously reviewed. Janice will assist you in finding those records and provide you a scan of the pertinent correspondence as needed.

## Example Agency Letter (Federal Undertaking)

Dear Mr./Mrs. [SHPO Reviewer]

As Agency Official per purposes of 54 U.S.C. 406108 (commonly referred to as Section 106 of the National Historic Preservation Act), we wish to consult with you pursuant to 36CFR800.3(g) about the proposed undertakings, approval of leases for well pads and grants of easement for associated access roads and pipelines (Project No. U12MX0255), on lands administered by the [Agency] in [County]. The area of potential effects includes all pad locations, easement, access road and pipeline corridors and comprises an area of [Acres].

In consultation with [list any additional consulting parties or agencies] as identified in 36CFR800.3, we have made a reasonable and good faith effort to carry out appropriate identification efforts as prescribed in 36CFR800.4 and have gathered sufficient information to evaluate the eligibility of the identified properties for the National Register of Historic Places (National Register). Identification efforts included an intensive pedestrian inventory of [Acres] and identified [Number of Resources] cultural resources, including [Number] historic properties. Documentation of this finding is provided in the enclosed report:

U12MX0255i,s: [Insert Bibliographic Reference that accompanies the agency letter]

It is our opinion that application of the National Register criteria has the following results:

Site Number	Type	Eligible	Criteria	Effect
42XX01111	Canal	Yes	A, C	No Adverse
42XX01122	Lithic Scatter	No	None	No Historic Properties
42XX01133	Historic Trash Dump	Yes	D	No Historic Properties

The proposed undertaking will avoid by project design both 42XX01122 and 42XX01133 by a minimum of 100', thus the [Agency] determines "No Historic Properties" affected for these two properties.

A road will cross 42XX01111, a historic canal, on an existing bridge that will need to be widened and re-surfaced. As the proposed widening and use of road does not significantly affect the character defining features of the property, nor diminish its eligibility for the National Register, the [Agency] determines "No Adverse Effect" for this property.

We conclude that a determination of "No Adverse Effect" pursuant to 36CFR800.5(b) is appropriate for the undertakings, as the projects will not alter those characteristics of the historic property that qualify it for the National Register.

As required at 36CFR800.5(c), we are submitting documentation of this finding of eligibility and effect and await your response within thirty days of receipt. We trust you will agree with this finding and seek concurrence that the Section 106 consultation process has been successfully completed for the subject undertaking.

If there are any questions, please contact [Agency Official or Archaeologist].

Sincerely,  
[Agency Official Signature]

Agency Officials must sign the agency letter, such as a responsible person at a Field Office Manager, Director, or other high-level position (rarely a cultural resources specialist)

## **Chapter 3: Pre-Fieldwork**

The UTSHPO feels that the most important component of any archaeological endeavor is the work completed before any fieldwork actually commences. Collecting all permissions and permits and completing a pre-field literature and historical research review is critical to the successful completion of the Section 106 or 9-8-404 process. A literature review should provide the agency and consultant with a basic knowledge of the area's specific resources, their range and variation, and identify gaps in data. Pre-field research is more than consultation of General Land Office maps, but should be a comprehensive review of existing prehistoric and historic narratives and summaries to guide identification efforts and eligibility discussions through a thorough understanding of contexts. Agencies will likely have specific pre-field guidance, and the UTSHPO guidance does not supersede those requirements and standards.

### **Permitting**

There are numerous permits and authorizations required to complete archaeological research, fieldwork, and data recovery. It is the responsibility of the consultant or private individual to follow all pertinent state and federal guidelines. If you are a consultant working on federal or state lands, the first call should be to the managing agency and their archaeologist to determine what steps you need to take to gain permission to enter their lands for archaeological inventory or research. Failure to follow proper permitting and authorizations could lead to civil and criminal penalties.

More specifically, the State of Utah has its own permitting process for archaeology. By Utah Administrative Code 9-8-305(5) and Rule R694, the Public Lands Policy Coordination Office (PLPCO) oversees archaeological permitting on State lands. There are two separate archaeological permits offered through PLPCO:

- Principal Investigator to Conduct Archaeological Surveys: Issued to qualified individuals to conduct surveys on state land ([§ 9-8-305](#)) and is required by the Antiquities Section of the Utah Division of State History to access archaeology site files and receive site and project numbers.
- Archaeological Excavation/Data Recovery: Issued to PLPCO-permitted principal investigators who need to perform testing or excavation of archaeological resources on state lands.

General qualifications for a PLPCO Principal Investigator Permit holder include a graduate degree in anthropology, archeology or history, at least one year of full-time professional experience, and at least one year of field and analytical experience in Utah archaeology. Administrative Rule R694-1-1 does allow for submission of evidence of significant ability to design and execute a research project in lieu of a graduate degree to acquire a permit. Application materials and procedures, along with more detailed information on the permitting process, are located on the [PLPCO Archaeological Permitting](#) website. That same website includes a listing of all active PLPCO permit holders:

<http://publiclands.utah.gov/archaeology/>

The Antiquities Section of the Utah Division of State History requires a PLPCO permit in order to access on-site archaeological records or to work with the online data viewer, Preservation Pro. Those

completing a file search are allowed to work under another person's PLPCO permit authority with pre-approval with the Antiquities Section and consent from the PLPCO permit holder. This requirement does not include federal archaeologists.

## Project Number Assignment

Most state and federal agencies in Utah require a State Project Number be assigned to a project prior to on-the-ground work being started. This is a statewide, cross-agency number that helps State History, and our partners, manage and track archaeological reports generated by fieldwork in Utah.

Important: Project Numbers will only be assigned to projects led by an individual with a PLPCO archaeological permit, or GS-0193 agency archaeologists.

Project Numbers are obtained prior to fieldwork and can be received by contacting the Archaeology Records staff at [archrecords@utah.gov](mailto:archrecords@utah.gov). The following pertinent information will be required:

- Organization name
- Project title (or we prefer the report title if known at the time)
- Principal investigator's name (including PLPCO permit number if applicable)
- Field supervisor's name
- Counties involved
- Landowner status (e.g. private; state; BLM; county; etc.).

Project numbers are assigned to the following:

- Archaeological surveys (class II and III)
- Monitoring projects with discoveries
- Data recovery or testing
- Site recordings where a report is generated

Project numbers are **not** assigned to the following:

- Literature reviews
- Comprehensive Class I-Existing Information Inventories (see BLM 8110 Manual for definition)
- Monitoring projects without discoveries
- Site recordings where a report is not generated

New Project Numbers must be requested for addendum reports. This assures we know whether an addendum does or should exist for an existing report.

## Literature Review

The Antiquities Section is happy to help facilitate records searches for archaeologists at our Rio Grande office. Please refer to your land managing agency, or contract holder, concerning your literature search requirements and needs. Due to the protected nature of the archaeology records, we require a [State of Utah Archaeological Permit administered by PLPCO](#) for access, except for federal archaeologists. As the Records program is only partially funded by state and federal funds, fees are assessed to access the records. Please contact the Records staff for the current fee schedule, which is included in Appendix B as well.

To conduct an onsite literature search:

- Schedule an appointment with Records staff at [archrecords@utah.gov](mailto:archrecords@utah.gov). Be prepared with an estimate of the length of time your search will require. Appointments must be scheduled at least 48 hours in advance. Appointments may fill up a week in advance, so please plan ahead. Please provide your PLPCO Archaeological Permit as part of the request, if you are not a federal archaeologist.
- Request a GIS search with records staff at [archrecords@utah.gov](mailto:archrecords@utah.gov). GIS searches need to be requested at least one full business day in advance please. GIS searches are not required, but are recommended and have a minimal charge (depending on the size).

For the GIS search, staff will require one of the following: 1) PLSS location (full sections only); 2) shapefile (preferred); or 3) USGS map with requested search area clearly marked (.pdf or .jpg). Please include your required buffer in your requested area or clearly state your buffering need.

- If a GIS search is performed by a Records staff, a simple spreadsheet of projects/reports and sites within your area will be provided.
- Prior to the appointment, complete the required paperwork provided by Records staff. Either mail the documents or bring them the day of your appointment. Please contact Records staff for pertinent paperwork.
- Be on time for the appointment. Missed appointments will be assessed a no-show fee.
- Once onsite you will be required to pull each required paper document from the archives. Additionally, you'll need to search newly received records not yet archived.
- Copies and/or scans of the documents can be made on our machine for a charge. Feel free to bring your own scanner to minimize these charges.
- Records staff refiles all pulled records. Please do not refile your own records.

UTSHPO always recommends checking the records of the land managing agency or landowner for information potentially missing from our files. There are often records that were not submitted, misfiled/plotted in our records, or just plain missing from our collection.

Another lesson learned through past experiences with archaeological compliance projects is the necessity of a periodic completion of a second (or more) file search if a project lingers for several years. For instance, a large scale linear undertaking completed a file search in 2008, but the actual implementation did not occur until 2014. In the intervening, period there were a number of additional surveys and documented sites within the APE that could have informed project implementation. Identification of additional resources within a previously completed inventory and file search boundary may create complications and delays in projects.

Finally, a literature review is a critically important step in completing the compliance process. Many consultants complete a minimum level of report review (largely a tally of basic bibliographic information). This is flawed logic and project planning as many projects might have completed inventories using non-standard methodology, excluded areas from survey that might not display well in

GIS layers, indicated site leads within the past project area or directly adjacent, or other potentially significant information that a simple bibliographic effort would fail to identify. For many past reports, an entire grazing allotment might have been displayed by an agency as being inventoried when, in fact, the report makes it clear that only a selected area(s) was intensively inventoried. In this example, GIS might display a block inventory when in reality there is only a small area that was surveyed. File searches at Utah SHPO or the agency should be comprehensive, not a simple checkbox exercise.

## **Preservation Pro**

The Antiquities Section can provide access to the Department of Heritage and Art's archaeology mapping and content management system: Preservation Pro. Access to Preservation Pro is limited to individuals holding a PLPCO Archaeology Permit and individuals working directly under such an individual, with both the Section's vetting and the permit holder's approval. Federal agency archaeologists can request access as well without a PLPCO permit requirement. Subscriptions are charged by user and run yearly on the State's fiscal calendar (July 1-June 30). Preservation Pro provides access to a map viewer of the Section's archaeology GIS dataset and currently scanned documents. As of January 1, 2016 approximately 95% of the Section's archaeology site form collection has been scanned and is available to users while no reports are yet available. The map viewer provides visual access to the GIS layers, but GIS datasets are not available for download. Users are welcome to take screenshots for future reference or external GIS digitization. Note: In 2016-2017, the State of Utah will be creating a replacement for the Preservation Pro system, details will be forthcoming.

Use of Preservation Pro will not meet your complete literature search needs. The lack of available digital reports and the site forms from certain counties likely necessitates an onsite search to the Antiquities Section and/or visit to land managing agencies. Additionally, while the Section works hard to quickly GIS digitize all incoming reports and sites, a digitization backlog is a reality and may lead to an underrepresentation of resources or previous investigations. The Section's backlog should be checked. Additional historic and prehistoric research will likely be required based upon your expertise and area of investigation. As previously stated, Antiquities always recommends checking with pertinent landowners for records that are missing or were never submitted to the Section.

## **Historic Research**

Many archaeologists fail to employ historic research in a manner appropriate to the expectations of the compliance process. Thorough historical research is not limited to merely a summary review of General Land Office maps. A broader suite of materials is available in paper form in archives, courthouses, or libraries and in freely available digital formats. All of these resources should be part of a normal pre-field research and the post-field reporting and eligibility discussions. Investing time before fieldwork will assist in identifying and understanding the nature of sites encountered during inventory and provides a better context for judging site eligibilities. It would be an expectation that every archaeological site form documenting a homestead or itinerant occupation will have minimally reviewed the GLO plats, land patent records, and any relevant secondary historic research. Without this contextual information and research into individuals, it is not truly possible to assess site eligibility under all criteria.

Appendix G includes a list of available online historic resources appropriate to Utah. Also, several archaeologists have demonstrated the utility of completing historic research even for prehistoric topics. For instance, Jerry Spangler's (2012) work reviewing early archaeological expeditions to Utah in the 1920s-1930s has identified dozens of undocumented sites, and Simms et al.'s (2012) review of surveying notes located Fremont-period canals. While both of these projects are research and not compliance driven, the overall relevancy of referring to historic documents for prehistoric sites is germane for some situations.

Spangler, Jerry D., 2012. *The Archaeologists of Nine Mile Canyon: Serendipity, Science and an American Treasure*. University of Utah Press: Salt Lake City.

Simms, Steven R., Chimalis Kuehn, N.K. Harrison. 2012. *The Archaeology of Fremont Irrigation*. Poster Presentation, 33<sup>rd</sup> Great Basin Anthropological Conference, Stateline, Nevada.

## **Permissions**

Responsibility for gaining appropriate permissions to access state, federal, or private lands is solely upon the consultant or individual. Failure to gain proper permissions before entering lands could lead to potential state and federal penalties at the discretion of the land managing agency. If there is a question on who to contact at these agencies for gaining land access, the Utah SHPO can assist in directing the query to an appropriate party.

## **Chapter 4: Fieldwork**

As noted elsewhere in this document, specifics of fieldwork need to be coordinated with the appropriate responsible and/or land managing agency. For consultants, any alteration to field methods needs to be discussed solely between the Agency and the UTSHPO and other consulting parties. Agencies need to consult with the UTSHPO before any alteration of identification strategies beyond the well-accepted norms detailed below. Submission of a report and site forms that are different than the details below without prior consultation will be rejected for consultation purposes. Please feel free to contact the UTSHPO and Agencies to discuss any unclear aspect of guidance regarding fieldwork expectations.

### **Inventory Methods**

Completion of a pedestrian survey is the most common means of identifying archaeological sites in Utah, though some use of remote sensing and limited test excavations have been employed to assist in those efforts. Some basic rules of thumb for completion of archaeological inventories in Utah are below:

- 15-meter transect spacing is a commonly accepted transect standard in Utah. Alteration of this spacing (which may be appropriate in certain circumstances) will necessitate consultation between the Agency and UTSHPO.
- Any inventory over 10 years old will likely require re-survey unless documentation of the adequacy of that inventory is provided in advance by the Agency to UTSHPO. In only rare cases should an agency submit a package to UTSHPO for formal consultation without first discussing use of surveys over 10 years old and the rationale behind that decision.
- All fieldwork and report writing need to be supervised by an archaeologist meeting the Secretary of Interior's Standards, Office of Personnel Management standards for a GS-0193 federal archaeologist, or holding a valid PLPCO Principal Investigator Permit.
- There are no site type exemptions from documentation in Utah, unlike other neighboring states. All sites that meet the definition below must be documented on an appropriate archaeological site form.
- Given Utah's generally high ground visibility, it is not expected that any inventory would use shovel probes to identify archaeological sites.
- Testing of archaeological sites during inventory is generally discouraged by the UTSHPO, unless there is question on the potential for the presence of important data and/or subsurface deposits, or the density of ground cover obscures visibility of cultural materials. Several federal and state agencies in Utah possess formal policies regarding the testing of archaeological sites for eligibility and extent.

The UTSHPO recognizes three basic levels of identification efforts for historic properties, Class I, II, and III:

- **Literature Review.** Reserved for the completion of a literature review of existing information for the APE or other geographic area defined by the Agency and UTSHPO in consultation. This is often a common exercise for the in-fill development of an oil and gas field where an existing well pad is being expanded and has already been inventoried.

- **Class II: Reconnaissance or Intuitive Survey.** This covers any archaeological survey that uses transects greater than 15 meters in spacing, projects that exclude areas from investigation due to slope, wetlands, etc., or for scientifically derived sample inventories of large block areas. Report maps need to clearly display the areas subjected to inventory at an intensive level (<15m transect), reconnaissance/intuitive (>15m transect), and those areas excluded from inventory. Surveys using over 15-meter transect spacing could be considered intensive, dependent wholly upon consultation with the UTSHPD before implementation per 36CFR800.4(b). An Agency must consult with the UTSHPD prior to completion of this type of inventory. Acreage falling under recon and intensive should be clearly articulated on the SHPO Cover Sheet and within the report text.
- **Class III: Intensive Pedestrian Survey.** This is the most common type of archaeological survey in Utah, and is marked by the use of consistently spaced 15 meter transects (or less) across the entire project area. It is felt that this level of inventory is appropriate for most undertakings, although if a specific project or area seems to require a less intensive strategy, then the agency should consult with the UTSHPD. Surveys using over 15-meter transect spacing could be considered intensive, dependent wholly upon consultation with the UTSHPD before implementation per 36CFR800.4(b).

## Archaeological Site Definition

The UTSHPD does not articulate its own archaeological site definition, but instead reference the BLM Manual 8110 “Cultural Resources Manual” for Utah. Some practitioners in the state approach a site definition as a dogmatic and unchanging fixture in the landscape of archaeological practice, but this is not the case. There is no statute or regulation that establishes the definition of an archaeological site either nationally or within the state. However, the BLM site definition is the generally accepted standard throughout the state across most land managing agencies.

Any alteration to this site definition needs to be completed in consultation between the Agency and the UTSHPD BEFORE fieldwork commences as site definition is considered part of the “Identification Phase” of the Section 106 process. Any report received with an alteration of site definition without prior consultation will be returned until such time the issue is resolved.

All archaeological or historic properties that are over 50 years old and meet the following site definition will be recorded on an appropriate site form. Utah’s archaeological site definition is as follows:

- At least 10 artifacts of a single class (e.g. debitage, ceramics, glass, cans) within 10-meter diameter area, except when all are from a single source (e.g. single pot, bottle).
- At least 15 artifacts of at least two classes within a 10-meter diameter area.
- One or more archaeological features in temporal association with any number of artifacts. (
  - A single structure or building such as a barn, concrete reservoir tank, or similar construction, should be documented as a site as it meets this definition.)
- Two or more temporally associated archaeological features without artifacts.

The UTSHPO encourages documentation of sites that fall below these thresholds if the consultant, agency, or avocationalist feels it is important to formally document a resource. Documentation of sites below the above thresholds does not need pre-consultation with the UTSHPO. Finally, the UTSHPO encourages a ‘better safe than sorry’ mantra for site documentation, meaning that if a site is questionable in age or number and types of artifacts/features, it is best to document and provide to the Agency and SHPO for review and comment.

### *Linear Sites*

Linear sites (e.g. roads, canals, railroads, trails, etc.), have their own suite of guidance completed by the Utah Professional Archaeological Council (Appendix C). Key points from this document are that nearly all linear sites should be documented as formal archaeological sites. It is critical to complete pre-field research to ensure identification of features on the ground while also ensuring that you do not check out multiple numbers for a single resource.

### **Isolated Finds**

All cultural material that falls below stated site thresholds is recorded as an “Isolated Find” and should be summarized in the text of any report as a table providing an individual Isolated Find number and a basic description of the resource. It is not expected for Agencies and consultants to supply geospatial information for “Isolated Finds” as the UTSHPO currently does not maintain an Isolated Find GIS dataset.

Numerous agencies and archaeologists perpetuate the inappropriate perspective that isolated finds are categorically not eligible for the National Register of Historic Places. While it is unclear where this perspective has its origin, it is clearly erroneous given the NRHP’s “Object” property type. Further, it is clear that isolated finds on a holistic view might shed important information on broad land use patterns through projectile point distributions, reduction areas, itinerant historic/prehistoric encampments, etc. Isolated finds are important and should be documented appropriately.

### **Site Number Assignments**

The Archaeology Records staff maintains the statewide ledger for archaeological site numbers. The State of Utah uses the standard Smithsonian trinomial site number system which defines the state number (42=Utah), the county (e.g. KA=Kane), and a sequential number (e.g. 500). This numbering system is recognized by the vast majority of state and federal agencies and landowners. **We do not assign blocks of numbers for sites yet-to-be discovered.**

If, as a result of fieldwork, archaeological sites are identified and will be reported, site numbers can be requested from staff at [archrecords@utah.gov](mailto:archrecords@utah.gov).

The following information will be required:

- Associated state project number
- New site count per county(ies)
- Requesting organization name
- Shapefile or geodatabase

In an effort to maintain a comprehensive dataset and avoid duplicate recording, key data points are required by Antiquities prior to the assignment of site numbers. Required information includes *temp number*, *date recorded*, *site class*, *site type* (New Form or IMACS), *state*, *project number*, *recorded by*, and *site name* (if appropriate). This data is to be submitted in a shapefile. In the rare cases where GIS technology is not available to an individual or contractor, a digital map and associated spreadsheet will be accepted. More detailed information on the shapefile requirement and digital templates are forthcoming.

Linear sites offer their own unique numbering issues, and the Antiquities Section maintains a master list of these sites. There are two master lists of the archaeological linear sites to ease searches for resources found here: <http://heritage.utah.gov/history/linear-sites-guidelines>. The first list is organized numerically by county, based upon the site's Smithsonian trinomial, and the second list is organized alphabetically by site name (i.e. Bob's Canal, Lincoln Highway, etc.). The two lists are the results of Utah State History working documents and are updated annually. Please contact a Records staff member if you find a discrepancy or have a question. If you need to request Smithsonian site numbers for a linear site, please follow the instructions listed above, additionally including the resource name. Names of previously unrecorded linear sites should always be provided to Records staff to avoid number duplication.

Although a site number may have been assigned to a linear site, we may not yet have a copy of a site form associated with the site. If we do have a copy of a site form associated with the linear site, it is possible (or likely) that the form does not directly record a section you are particularly interested in.

A complete archaeological literature search may not turn up all linear sites found within your prescribed area. Although a number may be assigned to a linear site within your project area, if the resource has not been directly recorded in your area, it will not turn up spatially in your search. Please consult the UPAC linear sites guidelines to ensure all linear resources are properly assessed.

We do not currently assign segment numbers to linear site numbers (e.g. 42TO1077.3, 42TO1077.4). When completing a site form for a segment of a linear site, the site number should be listed with the Smithsonian trinomial first, followed by "segment" (e.g. "42TO1077 segment" not "42TO1077 segment 2") with no segment number defining notation following. Segment numbers are relative and arbitrary assignments are not assigned by Antiquities.

The names provided on the two linear sites lists are names provided by the archaeologist recording the resource. Beyond the SHPO consultation process, UTSHPO does not have the time or resources to check the accuracy of the names or the other recording issues beyond what was reported by the field archaeologist.

Consult with your land managing agency for additional specifics pertaining to linear resources occurring on their land.

## **Do You Use a Building or an Archaeological Site Form?**

Perhaps the largest gray zone in site documentation and UTSHPO review is the presence of historic-period architectural elements. A general rule within the UTSHPO to differentiate the use of an Archaeological Site Form or the Historic Site Form (for buildings) is the presence or absence of a street address. This is easily relatable for architectural properties within developed urban areas, but abandoned rural homesteads and communities may lack a formal address but still contain architecture with a high degree of integrity.

The UTSHPO encourages use of the Historic Site Form (see Appendix E) for archaeological sites with standing architecture, as defined by the presence of recognizable wall elements above 4' tall. This form would be used in addition to the archaeological site form that would document the remainder of the property. Use of a Historic Site Form (buildings) is encouraged as it is structured to guide a recorder to answer specific questions regarding architecture in a manner and format not found in general archaeological site forms. Building forms are not a UTSHPO requirement for archaeological resources.

## **Documentation Expectations for Site Revisits**

During archaeological inventories, crews oftentimes encounter previously documented sites within the APE. The UTSHPO has no requirement of revisiting specific sites, but it is expected that the Agency will require the revisit of all previously documented NRHP eligible sites and undetermined/unevaluated sites in the APE at a minimum. Variation from this can be accomplished through both formal and informal consultation with the UTSHPO, where rationale for alterations to this guideline can be discussed. Updates to site documentation should be completed when any of the thresholds are met below:

- Site recording is over 10-years-old.
- Notable changes to the site content or structure were identified.
- The site could not be relocated or was destroyed.
- Unrecorded segment of a linear site.
- Change to National Register of Historic Places status.

Site updates need not be on full archaeological site forms but instead could be shortened forms with only those aspects of the site being updated provided for review. For example, each line on an archaeological site form is numbered and the updated documentation could merely provide the line number and the updated information. Minimum requirements for a site update is the site number, county, project name and number, location, date of revisit, and any updated lines of data.

## **Ancient Human Remains Process**

It is possible in inventory and/or data recovery excavations to encounter human remains. If you find human remains, do not disturb them further. In Utah it is a third degree felony for anyone except an archaeologist, the Medical Examiner's office, law enforcement, or a licensed mortician to disturb, move, remove, conceal, or destroy human remains.

No matter what the age of the bones appears to be, leave them in place and call the local law enforcement agency. It is recommended that all work stop within 50'-100' of the discovery. If the

remains are ancient and not on federal lands, law enforcement will contact the Antiquities Section of State History. For more information please visit: <http://heritage.utah.gov/history/human-remains>

Human remains discovered on federally managed land will be treated consistent with all requirements of NAGPRA and its implementing regulations at 43 CFR 10. Human remains discovered on State, SITLA, or privately owned land will be treated consistent with all requirements of applicable Utah State Laws regarding the treatment of human remains including Utah Code Annotated (UCA) 76-9-704, UCA 9-8-302, UCA 9-8-309, and UCA 9-9-401 et seq.

## **Chapter 5: Reporting**

The UTSHPO has a series of expectations for reporting on archaeological inventories, testing, and data recovery projects. All of the following standards have been the accepted procedures and formatting in Utah for many years, and it is expected that all consultants and agencies will adhere to these guidelines. Failure to meet these standards may lead to non-concurrence and/or return of submitted materials.

Currently, UTSHPO only accepts paper submissions of agency letters, reports, and site forms for Section 106 or 9-8-404 consultation. All reports must be formally provided by an Agency, unless otherwise discussed before submission with the UTSHPO.

### **Survey and Data Recovery Reporting**

The Antiquities Section currently does not have a preferred format for reports, but generally the provisions included in Appendix 2 of the Bureau of Land Management's "Guidelines for Identifying Cultural Resources, Handbook H-8110" for Utah is followed. The agency managing the lands or permitting an action may have specific requirements and expectations for reporting standards above and beyond the UTSHPO, and it is the responsibility of the consultant to meet those standards.

### **General Report Guidance**

Pertinent information and expectations of a survey report will include:

**UTSHPO Cover Sheet:** This is a required component of all data recovery or inventory reports submitted to the UTSHPO, as this is the critical data sheet for tracking all projects entering the Antiquities Section. A submission without a UTSHPO Cover Page will be returned to the responsible agency or independent party (for non-compliance related projects). The UTSHPO Cover Sheet is located [here](#) with instructions for its completion located [here](#) ([history.utah.gov/](http://history.utah.gov/)). Please staple your project cover sheet to your report. The cover sheet is a permanent archived addition to your report

**Title Page:** In order to properly track the significant connections of a survey report, the title page is highly recommended to include at least the following information:

- UT SHPO State Project Number
  - Each new undertaking should receive its own new number.
- Title (Same or similar to the title provided when requesting project number)
- Agency or Agencies

- Author(s) and Organization(s)
- Date
- Internal organization project number (if appropriate)

**Nature of Proposed Undertaking:** Regardless of the results of the inventory, it is important to explicitly state the nature of the proposed undertaking highlighting the specific techniques and activities proposed. For instance, an undertaking described as “reducing fuel loads by removing trees and shrubbery” is an insufficient description of the undertaking as it does not specifically call out the proposed action. Is the project using heavy equipment? Hand tools? Piled burning post-treatment? It is impossible for the UTSHPO to comment on an undertaking when it is not clear what the proposed action entails. Each specific type of action has a different potential to effect historic properties.

**Area of Potential Effect (APE):** After defining the proposed action, it is secondly important to account for the most appropriate APE. Only after understanding the nature of the proposed action can you adequately define the APE, and may reflect some input from consulting parties. While the direct footprint of a new transmission line is rather small, the potential visual effect can extend much further, perhaps even miles, from the proposed action. The report should include a specific description of the APE, and how the Agency defined this area. Please ensure that if you have a linear APE or survey area, you properly define its width for both documentation and our digitization efforts.

**File and Pre-Field Research:** While most consultants and agencies are skilled at the file search requirements of the UTSHPO, there is need to be more explicit in the buffer for the undertaking based on the APE described above. UTSHPO prefers a 1/2-mile buffer for all file searches, but that buffer may be inappropriate for the potential visual effects of a transmission line, open-pit mine, or other similar action. In addition to the standard file search, the report should also include an appropriate amount of detail on the primary or secondary historical research completed before conducting inventory efforts. This should be scaled to the nature of the undertaking, its location, and the potential for sites. While General Land Office plats are good resources, these should usually not be the only historical record consulted. Aerial photography provide landscape level views of potential constructed prehistoric and/or historic features, as well as topographic and geological features that can inform fieldwork.

**Field Methods:** This section of the report must include specific techniques used during the inventory process, including the description of survey intervals, areas of reconnaissance versus intensive survey, and site definitions. Currently, there is no standard for site definitions in Utah, but most agencies and consultants default to the Bureau of Land Management Guidelines (2002). In addition, any alteration to routine inventory should be explicitly described, including, but not limited to, testing (shovel or auger probes), collection, field sampling by portable XRF, etc. If there is any testing or probing conducted, the report should include a separate section describing the results of these activities on both a site-specific and synthetic basis. No testing or surface collection of a site should be done without prior consultation between the UTSHPO and the responsible Federal or State Agency. If the survey corridor in a linear project does not match the previously described APE, include the surveyed corridor width in meters.

The UTSHPO also requests at least one or two photographic overviews of the project areas if possible, especially for small projects or for those with a high potential of a visual effect (towers, transmission lines, etc.).

**Project Maps & Geographic Information Systems (GIS):** UTSHPO understands that not all projects lend themselves to be easily represented on a 7.5' USGS topographic quadrangle. However, it is necessary that project maps provide sufficient scale and detail to allow understanding of the APE, inventory areas, and the location of the project within Utah. This includes a formally referenced base map, including the name of the quadrangle and the year of publication. The actual inventory area should be clearly illustrated. Areas excluded from inventory, but still within the APE, perhaps because they were inventoried within the last ten years, should also be clearly defined. Accompanying GIS information with the report is extremely useful, but should not be a substitute for a good map. Please contact the Antiquities Records Office for more information on maps and GIS submissions.

**General Comments:**

- While seemingly a “no-brainer,” the report agency letter and report itself should make specific reference to the agency (or agencies) the report is completed for, and under what regulatory framework (Section 106 of the NHPA and/or Utah Code 9-8-404).
- Agencies must review a consultant report before submission to UTSHPO to ensure the attachment of all pertinent information, but also to formally make *determinations* on the *recommendations* of consultants for eligibility and effect.
- Reports should be free of major grammatical and spelling errors before arrival at the UTSHPO. Consultants and Agencies must ensure that the product received by UTSHPO is of the highest quality. Any report that requires more than minimal editing by UTSHPO will lead to return of the entire report for correction, without concurrence.
- Agencies should work with consultants to ensure that the cultural context portions of reports are appropriate for the scale of the undertaking. It is not usually necessary to have a thick historic context for an inventory that failed to locate any cultural resources. Fluffing up reports is not necessary and is not environmentally friendly.
- It is, of course, appropriate to copy and paste the site information from the completed archaeological site forms into the body of the report when summarizing inventory findings. However, it is important to ensure that both the site form and the report reflect the same information. Some examples exist of apparently post-report editing of site forms with failure to update the body of the text (or vice-versa).
- If you are supplying GIS, ensure that the digital data is clearly labeled and defined to assist easy incorporation of this information. Please reference the 2011 BLM Digital Standards and see our Digital Data Standards below.
- When documenting historic buildings and structures, use the Historic Site Form in place of, or in addition to, the archaeological site form where appropriate. Historic structures identified on archaeological sites might be more adequately recorded on Historic Site Forms to standardize descriptions, with final attachment to the archaeological site form.

- Reports need not be bound, but should at the minimum be binder clipped or somehow held together. Digitization of reports in the future will be aided by provided non-bound reports.

All site recording and reporting should be completed in consultation and compliance with relevant land managing agency standards and practices. Where such standards do not match those listed above, please contact us.

### **Negative Report Form**

The UTSHPO released a “Negative Report Form” in 2014 in hopes of streamlining report submission for Class II – Reconnaissance Level Field Survey and Class III - Intensive Pedestrian Surveys that are small in nature and did not locate any archaeological resources (sites). UTSHPO noted rampant issues of inappropriately large copy/paste cultural contexts were being provided for small negative inventories, adding useless bulk to such reports. To alleviate this issue, the ‘Negative Report Form’ (Appendix F) was created and identifies only those portions of a normal report that are necessary for completion of the compliance process. It is hoped that all agencies in Utah will allow use of this form to trim costs and wasted effort for small inventories. The provided form focuses consultants and agencies on providing clear and concise information on project background, definition of Area of Potential Effects (APE), identification strategies, and findings. Removed from this form are lengthy cultural or historical contexts and backgrounds that are not necessary for negative reports that offer little to review or management of cultural resources.

For the purposes of this form, the UTSHPO generally views its use for any project that is less than 50 acres in size and lacks archaeological sites. This does allow for isolated finds to be identified and still use this form, but those isolates will need to be discussed in the report.

Use of this form is up to the individual agency, and the consultant is encouraged to discuss use of the Negative Report Form before submission to the agency (Please email the UTSHPO Staff for a copy of the Negative Report Form).

### **Archaeological Site Form**

Since the 1980s, all archaeologists in Utah have used the IMACS form, which created a consistent documentation standard for nearly four decades. However, the IMACS was showing its age and was deemed to be collecting information no longer necessary in the world of available GIS data layers for environment and geology. Thus, in 2012 PLPCO initiated an effort to update the IMACS and create a new form template for use throughout the state. It is expected that by 2016, the as of yet unnamed new archaeological site form will be launched. Readers should be aware, however, that the United States Forest Service (USFS) is creating a new agency-specific National Site Form that will be required on National Forests and Grasslands. If you are conducting work on USFS lands, make sure to coordinate with their heritage specialists.

Until the new form is launched, the UTSHPO expects all archaeological site forms to still be in the IMACS format. Many consultants and agencies in Utah have custom-built generators to build IMACS site forms in addition to fillable Microsoft Word versions. Release of a site form generator for the new form is expected but is still in the scoping phase, with the subscription price currently unknown.

Following are some general comments and perspectives by the UTSHPO on archaeological site form data quality:

**General Comments:** UTSHPO appreciates that site forms are stapled and collated with their photographs. If site forms are too large for staples, than a binder clip is appropriate. UTSHPO will not collate photographs and site forms into their respective packets; this is the consultant's or agency's responsibility. Consistent non-compliance with this issue will result in returning of consultation materials by the UTSHPO.

- Please staple site forms together, including photos. Photos detached from their site form are unacceptable. Please avoid paper clipping the record together as elements often get lost.
- Site forms should not be bound as part of the report. Site forms should be included separately and be stapled.
- Site forms should be typed and professionally formatted. Handwritten forms are unacceptable.
- IMACS encoding forms are currently required. Encoding forms must also be stapled to either the front or back of the site form, as they do not reside with the site form in UTSHPO records. Please do not include the encoding form in the middle of the site form. Additionally, if submitting double-sided site forms, leave the encoding form single sided, and again, at the front or back of the form. If you'd like to submit encoded data electronically, please see contact a staff member.
- Encoding forms for updated or revisited site forms are required. Only the updated fields need to be completed.
- Printing your reports and site forms double-sided is acceptable and helps save space and trees. But, please do not include the encoding form as part of the double-siding (see above).
- Concerning the Smithsonian trinomial, we do not require a six-digit expression of the numeric component. We prefer no extra zeros be added. For example 42KA111 is the preferred composition versus 42KA000111.
- Concerning the Smithsonian trinomial, we have no requirement on the capitalization of the two letter county abbreviation.
- Please be sure all figures, especially maps, are clearly legible in your final print out. These figures are often used to relocate resources and/or digitize from. Please provide these figures with this in mind.
- Previously recorded site records obtained during a project's literature search should not be included in the submission packet--unless you are confident State History does not have a copy and are providing it as such.
- It is appreciated, but not yet required, that photographs be additionally provided printed on standard sized (8.5" x 11") sheets of paper. This allows for easy sheet feeding through a copier or scanner.

- Since an archaeological site excavation project permanently alters the site, an update to the site's IMACS form is required as part of the final report.
- Site forms should always include a map, based on a USGS 24k quadrangle, which clearly shows the site location.
- If the site form is an update or addendum of a previously recorded site, it should be clearly noted next to the site number in brackets (or prominently displayed in the site description).
- Sites that straddle county boundaries require two numbers--one for each county. One site recording should be generated, but two copies of the site form should be provided.
- A paper copy of your report and associated site form is required. In addition to the paper record, we encourage you provide a digital copy (in .pdf format) of your records submission as well. Information concerning these additional submissions will be updated soon.

**Locational Information:** There has been some issue as of late with errors in the Legal Description of site location (Township & Range), but also the UTM coordinates. Please ensure that this information is correct before submission. Please ensure that NAD83 is the datum used for UTM coordinates.

**Eligibility Statements:** It is important to check the appropriate eligibility box on all site forms. Currently, the UTSHPO does not recognize the category "unevaluated" as professionals and agencies should be able to make some type of determination. Within the National Register of Historic Places (NRHP) Eligibility Justification section, the agency/consultant should account for all four of the NRHP Criteria, including a discussion of the site's integrity. DO NOT state that the "site's data potential has been exhausted by the recording," as that is not appropriate to the consultation process. That statement recognizes that the site possessed data potential, thus making it eligible to the NRHP, and that the organization/agency removed its eligibility during inventory, thus becoming judge, jury, and executioner of a site's eligibility while on-site. It is also expected that the seven aspects of integrity are included in site eligibility discussions (location, setting, workmanship, materials, design, feeling, association) to help in determining NRHP status. For more information, including guidance on evaluating cultural resources within their own historic context, review National Register Bulletin: 15 How to Apply the National Register Criteria.

**Historical Research:** For sites including historic roads, homesteads, mining claims, ditches, or other similar resources, it is not only important, but necessary to identify the historical resources consulted to compile the historical background on a site. Similarly, it is inappropriate to record a site without at least attempting some type of historical research to understand the site's contextual associations. Take, for example, the identification of a "ranching camp" within the center of a historically defined, mapped, and recorded mining district. While that is a possible function, the site form did not discuss how the determination of a ranching camp was made versus the preponderance of historical evidence to the contrary. There are numerous websites and in-person sources that can be consulted to conduct sufficient historic research (Appendix G).

**Site Maps:** Consultants and agencies provide a wide variety of quality site maps, but from UTSHPO the most critical information is in regards to the location of this site in space. Submission of a site map with

no spatial reference, or a small site plotted on anything greater than 1:24,000 scale quadrangle, creates an error in the SHPO database. While providing GIS files does alleviate this error, many consultants rely on the site maps in the site form to relocate sites on a landscape. Poor site maps create poor data, and thus poor management. Please follow the guidelines for “Cartographic Best Practices for Archaeological Records Submissions” to the UTSHPO:

1. Reports must include a clearly defined survey or archaeological activity area. If applicable, include a clearly defined site boundary(ies). Actual defined site boundaries should be portrayed.
2. Show all relevant data on the map(s). If you have a project map, clearly show the surveyor activity area. If the project encompasses a large area, please provide a properly scaled map showing the project in its entirety. Also include maps breaking the project into smaller areas for map viewing, ensuring the audience will be able to read the information on the map.
3. All report and site maps should have a relevant USGS 24k base map and be scaled appropriately for future interpretation and potential georeferenced GIS digitizing. The map legend should include the name of the 7.5' Quadrangle(s) displayed.
4. Include clearly defined symbology. Each item of information in the map(s) should have its own, clear symbology. For example, if you have a canal survey, the canal should be colored in such a way to distinguish itself from other linear features in the area (e.g. rivers, streams, or roads).
5. The map(s) should have each element of data that is represented in the map symbolized in a directly associated table of contents or legend.
6. At a minimum, each map should contain the Utah state project number (e.g.UXXXXXXX), scale bar (meters for prehistoric sites, and feet and meters for historic sites), scale text, a north arrow orientation, projection and datum information, legal location, map author, and PLSS or graticule.
7. Any sourced data that was not directly created by the map's author should be cited, including the creator agency, corporation, etc., and the year it was created if available.

\*\*Submission of maps and other report materials via CD in any digital image (JPEG, TIFF, BMP ,etc.) or PDF format is welcome (in addition to the hard copy report requested by UTSHPO). The BLM requires these submission materials. You may also send shapefiles of survey or project areas on a CD as a supplement to ensure that we have the most accurate data available.

## Photographic Standards

The Antiquities Section requires original site photographs (B&W or color) be submitted for each archaeological site form in an archival photo sleeve. No preference is given between film or digital-camera-produced photographs, but in either case, the photo must be clear and of sufficient quality for the printing size. Photos must be printed on acid-free, archival quality, photographic paper with archival quality ink. Certain modern business printers can meet these requirements. Photo pages (8.5×11”) with printed captions are acceptable, but must meet the archival-quality standards. Standard (non-page) photographs submitted should have captions viewable without a researcher needing to remove the photo from its sleeve. Photos for site forms should not be submitted any smaller than 3×5”.

Digital submissions of site and report documents (.pdf) are encouraged to *supplement* the required paper copies. Currently the best way to submit site photographs digitally is through a .pdf document of the site form.

Because these records must endure and remain accessible in perpetuity, all records submitted to this office must be of the best quality possible and on the best materials possible. We encourage additional photos of diagnostic or unknown types of artifacts, features, or other pertinent views.

## Digital Data

The UTSHPO is in process of establishing a set of digital data standards for archaeological record submissions. Currently, the Antiquities Section requests that agencies completing archaeological project review provide a CD with PDF versions of site forms and reports in addition to geospatial information for inventory and site locations. Please follow the BLM Digital Data Standards ([http://www.blm.gov/style/medialib/blm/ut/natural\\_resources/cultural/archaeology/arch\\_documents0.Par.53469.File.dat/BLM%20Data%20Standards%20May%202012.pdf](http://www.blm.gov/style/medialib/blm/ut/natural_resources/cultural/archaeology/arch_documents0.Par.53469.File.dat/BLM%20Data%20Standards%20May%202012.pdf)) for formatting all submissions. It is critical to have all report and site forms in PDF format, preferably PDF-A (archival quality) format that is also OCR for full searchability. It is the responsibility of the agency to ensure the proper documentation for both the paper and digital records, and unsatisfactory digital submissions could lead to a non-concurrence letter until rectified. UTSHPO will be providing specific standards for GIS data formats and data populations. Until that point, please contact the Archaeological Records office for more details.

## Required Submission Materials Checklist

For all federal and state cultural resources compliance cases, there is a set of required materials that meet the minimum standards for completing the review by the UTSHPO. It is the responsibility of the Agency to ensure that the submitted packet contains all required information per the standards in this section and throughout this guidance document. Failure to provide the following required information will likely lead to delays in the review process as the UTSHPO requests the missing materials and provides a formal comment of “insufficient materials,” which restarts the 30-day review clock. While there should be no deviation to the required materials, if there is an extenuating circumstance that requires omission or late submission of a component, please contact the UTSHPO before submission to discuss. Unless specifically discussed with the reviewer, the UTSHPO does not accept reports or site forms in “Draft” or “Final Draft” format.

- Consultation Materials
  - Agency Letter clearly detailing the project, APE, eligibilities and effect.
  - Agency Map of APE
- Archaeological Report
  - SHPO Cover Sheet
  - Final Report
  - Inventory or Investigation area map
- Archaeological Site Forms
  - Completed Archaeological Site Form(s)
  - Site Sketch & Locator Map

- Photographs to UTSHPO Standards
- Digital Data (see Digital Data Section Above)
  - CD with:
    - PDFs of all submitted materials
    - GIS of inventory areas and site locations
    - Spreadsheet with Tabular Data

## Non-Compliance Submissions

The UTSHPO is happy to accept all archaeological site forms and inventory reports regardless of their status as a compliance case. There are many instances where projects were cancelled, volunteers completed site assessments or documentations, or Agency staff completed in-house inventories, updates and documentations, and the resulting records were never submitted. As codified in both state and federal statute, the UTSHPO is recognized as the central repository for all archaeological and historical inventory and documentations.

As such, we encourage avocationalists, volunteers, and agency archaeologists to provide copies of this information for our records. Of course we prefer that this information is funneled through the appropriate land managing agency with formal determinations of eligibility, but with extenuating circumstances, we can accept direct submissions. In these cases we prefer that the documentation adhere to all other pertinent requirements in this guidance document, but understand that some parties may be incapable or unable to comply due to budget and time constraints.

Non-Compliance Archaeological Sites: Submissions for archaeological sites should be routed through an appropriate land managing agency, unless there is no archaeologist on staff or the sites are on private lands. When archaeological sites are submitted directly without formal determinations of National Register of Historic Places eligibility from an Agency, the UTSHPO will add these to the files as “undetermined.” Future archaeologists will then need to reassess the eligibility if the site is encountered in a future inventory or undertaking. It is more important to the UTSHPO to have these records on file for future projects and planning than to hold volunteers and avocationalists to the high standards reserved for agencies and consultants.

Non-Compliance Inventories: Submissions for inventories should also be sent through the responsible land managing agency, unless the inventory is on private lands. Any inventory received will add to our database, but only those completed by a professional archaeologist meeting the Secretary of Interior Standards will be indicated as an intensive inventory. All others will be considered a reconnaissance survey, such as rock art inventories by volunteers, etc.

Please contact your UTSHPO and/or Antiquities Records staff for any queries regarding non-compliance related submissions.

## **Chapter 6: Conclusion**

Guidance documents are organic in nature, and the material will be periodically updated and clarified. Major changes to this document will result in a mass communication to all agency partners and the PLPCO permit list. If you see any issues or errors in this document, please contact [Chris Merritt](#) with the comment or request for clarifications. It is important to remember that the point of cultural resource compliance is not merely meeting the minimum requirements but taking into account the effects of projects on the irreplaceable pieces of Utah's past. Living and past peoples have possessed an intrinsic affiliation with the Utah landscape and left indelible marks upon the landscape, and this is oftentimes what archaeologists encounter. All practitioners need to remember that for most archaeological sites encountered, this is the only time they will be seen by a trained professional that cares about the information and story left behind in debitage, pottery, cans and bottles. The highest standards of ethical archaeology is not only expected, but required.

## **Appendix A: Historic Research Resources**

Sites and artifacts are worth only as much as the context in which they are found and their relations to other artifacts, features, and landscapes. A better understanding of human history is the real goal of archaeology, and to accomplish this lofty goal, we must place our findings in adequate context. A group of blasting cans, liquor bottles, and ironstone might be an expected pattern in a mining community, but what if it is found on the fringes of a heavily religious community? That simple change of context can lead us to completely new frames of reference in our understanding. To build a context, the archaeologist must understand the past historic and prehistoric uses of the landscape, and thankfully historical documents can provide some data in this respect. Historical documents alone, though, do not tell the entire story, which is why artifacts provide that unbiased reflection of personal and collective human action. Listed below are repositories of historical information that are largely freely available on the internet and can add to the history of humans in Utah and beyond.

### **Utah-Specific Online Primary Resources**

- Utah Digital Newspapers  
<http://digitalnewspapers.org/>
- GLO Survey Plats  
[http://www.ut.blm.gov/LandRecords/search\\_plats.cfm](http://www.ut.blm.gov/LandRecords/search_plats.cfm)
- GLO Homestead Patents  
<http://www.gloreCORDS.blm.gov/>
- Utah Water Rights Online Database  
<http://www.waterrights.utah.gov/wrinfo/query.asp>
- Sanborn Fire Insurance Maps  
<http://content.lib.utah.edu/cdm/landingpage/collection/sanborn-jp2>
- Historic Utah Topographic Maps  
<http://www.lib.utexas.edu/maps/topo/utah/>
- Historic Utah Maps  
<http://www.davidrumsey.com/>
- Historic Panoramic Maps (Brigham City, Ogden, Salt Lake City)

<http://www.loc.gov/collection/panoramic-maps/>

- Utah State History Online Research Catalog  
<http://utsl.sirsi.net/>
- Utah State History Online Photo Database  
[http://history.utah.gov/research\\_and\\_collections/photos/index.html](http://history.utah.gov/research_and_collections/photos/index.html)
- Utah Cemeteries and Burials Database  
[http://history.utah.gov/research\\_and\\_collections/cemeteries/index.html](http://history.utah.gov/research_and_collections/cemeteries/index.html)
- Utah Death Certificates (1904-1961)  
<http://www.archives.utah.gov/research/indexes/20842.htm>
- Utah Birth Certificates (1905-1911)  
<http://www.archives.utah.gov/digital/81443.htm>
- Utah Animal Brand Books (Possible Use in Identifying Arborglyphs or Historic Rock Art)  
<http://www.archives.utah.gov/digital/540.htm>
- Trails of Hope: Overland Diaries and Letters  
<http://overlandtrails.lib.byu.edu/>
- Utah Rails.net  
<http://utahrails.net/>
- Utah American Indian Digital Archive  
<http://utahindians.org/archives/>

### **National Online Primary Source Databases**

- National Register of Historic Places Database & Research  
<http://www.nps.gov/nr/research/>
- HABS/HAER Database  
[http://memory.loc.gov/ammem/collections/habs\\_haer/placeU.html](http://memory.loc.gov/ammem/collections/habs_haer/placeU.html)
- Clearinghouse for Free and Subscription Genealogy Resources  
<http://www.accessgenealogy.com/utah/>
- USGenWeb Archives  
<http://usgwarchives.net/ut/utfiles.htm>

- Freely Accessible U.S. Federal Census Records (1790-1930)  
[http://archive.org/details/us\\_census](http://archive.org/details/us_census)
- Indian Population Schedules (1885-1940)  
[http://archive.org/details/us\\_census](http://archive.org/details/us_census)
- Google Books (many primary/secondary Utah historic resources are digitized)  
<http://books.google.com/>
- Archive.org (many free digitized historic volumes)  
<http://archive.org/details/texts>

## Secondary Resources

- Utah Historical Quarterly Online Database  
<http://utahhistory.sdlhost.com/>
- Utah Architecture Guide  
<http://history.utah.gov/architecture/index.html>
- National Register Bulletins and Publications  
<http://www.nps.gov/nr/publications/index.htm#bulletins>
- Vernacular Architecture Online Bibliography  
<http://resources.umwhisp.org/vafbib.htm>
- Society for Historical Archaeology (pre-2007 Journal articles are free)  
<http://www.sha.org/publications/pubsexplorer/default.cfm>

## Utah Institutions with Online Digital Archives

- Mountain West Digital Library  
<http://mwdl.org/>  
\*\*This resource also searches Utah State History, and the digital collections of USU and BYU
- Utah State University Digital Collections  
<http://digital.lib.usu.edu/>
- Weber State University Digital Collections

<http://dc.weber.edu/>

- University of Utah Digital Collections  
<http://www.lib.utah.edu/collections/digitalCollections.php>
- Brigham Young University Digital Collections  
<http://lib.byu.edu/digital/>
- Utah Valley University Digital Archives  
<http://contentdm.uvu.edu/index.php>
- Southern Utah University Digital Archives  
<http://www.li.suu.edu/page/special-digital-collections-digital-archives>

## Historic GIS Databases

- Historic Aerial Imagery: 1936-1952 (Majority in 1941)  
<http://gis.utah.gov/data/utah-sgid-image-server/>
- Historic Districts in Utah  
[ftp://ftp.agrc.utah.gov/UtahSGID\\_Vector/UTM12\\_NAD83/HISTORY/UnpackagedData/HistoricDistricts\\_Statewide/](ftp://ftp.agrc.utah.gov/UtahSGID_Vector/UTM12_NAD83/HISTORY/UnpackagedData/HistoricDistricts_Statewide/)
- Lake Bonneville Extent  
[ftp://ftp.agrc.utah.gov/UtahSGID\\_Vector/UTM12\\_NAD83/WATER/UnpackagedData/HistoricLakeBonneville\\_Statewide/](ftp://ftp.agrc.utah.gov/UtahSGID_Vector/UTM12_NAD83/WATER/UnpackagedData/HistoricLakeBonneville_Statewide/)

## **Appendix B: Fee Schedule for Antiquities Records**

## **Appendix C: Linear Sites Effects Guidance**

### **I. Introduction**

Linear sites are perhaps some of the most commonly encountered cultural resources in Utah due to not only their ubiquity but also their length. Linear sites can include a wide variety of types that are joined by a common theme. They are longer than wide and can include roads, railroads, canals, ditches, trails, power lines, telephone, and telegraph lines. Given the significance of water conveyance, transportation, and communication infrastructure to the settlement of the American West, with Utah being no exception, many of these sites (historic properties) are listed on, or determined eligible, for the National Register of Historic Places. These sites present a unique suite of issues when encountered during inventory, but the Utah Professional Archaeological Council's (2008) Linear Sites Recording Guidance helps to formalize a professionally sanctioned and standardized means of recordation. While the Linear Sites Guidance helps to standardize the recordation efforts by consultants and agencies, determining effects to this site type under 36CFR800 remains a moving target, with difficult and sometimes varying interpretations.

In hopes of providing federal and state agencies with some guidance for determining effects for undertakings involving linear sites, this document attempts to outline some of the most commonly seen types of activities affecting linear sites as seen by the Utah State Historic Preservation Office (UTSHPO) through the federal Section 106 process of the National Historic Preservation Act, or its state equivalent codified in Utah Title 9, Chapter 8, Section 404 (or more commonly known as Utah Code 9-8-404).

UTSHPO does not possess an in-house rubric for determining adverse effects, with each case viewed contextually. This document is not the end of consultation, but is provided to merely outline some of the more common effects with thoughts on how to adequately determine if the proposed action will have an Adverse Effect (36CFR800.5) to a historic property. UTSHPO urges agencies and consultants to converse with its staff before submitting formal consultation to help determine if an undertaking will have an adverse effect on a historic property. Many times the UTSHPO will have more information on a linear feature and may help agencies to work through other options for their undertakings.

### **II. Determination of Effect for Linear Site**

As stipulated in 36CFR800.5(a)(1), an adverse effect is considered "when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property...in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling or association." Types of adverse effects, as outlined in 36CFR800.5(a)(2), include physical destruction, alteration inconsistent with the Secretary of the Interior's Standards, moving of property from its original location, change of the character of the property's use contributing to significance, introduction of visual effects, neglect, or transfer out of public ownership or control. Most of these criteria of adverse

effect apply to linear sites, except the movement of a historic property from its historic location, unless discussing a feature within a historic property.

Most linear sites are eligible or listed for the NRHP under Criteria A or C, sometimes B, and rarely D. As such, the determination of effect needs to focus on the proposed undertaking's effect on the integrity criteria most relevant for its significance. National Register Bulletin 15 (1991:44) outlines the seven aspects of integrity for a historic property, including location, design, setting, materials, workmanship, feeling, and association. Further, for a historic property to retain integrity it "will always possess several, and usually most, of the aspects," but for each property type there is likely different criteria focus. The most important Integrity for linear features, which are commonly eligible under A and C, should be location, design, materials, and association.

In order to adequately gauge the most important integrity criteria, the proponent must identify the essential physical features of the property, whether these features are visible, is the site comparable to others of the same type, and which aspects of integrity are the most important (National Register Bulletin 1991:45). Modifications to these essential physical features that comprise the integrity of the linear site is potentially an adverse effect, dependent on the magnitude of such alterations to the overall system. Perhaps the most critical integrity issue is the visibility of the essential physical features for properties eligible or listed under Criteria A, B, or C. As noted by the NRHP, "the features must be visible enough to convey their significance. This means that even if a property is physically intact, its integrity is questionable if its significant features are concealed..." (National Register Bulletin 15:46).

In the case of a historic home, defining and assessing all of the essential physical features is relatively easy in both a spatial and logistical sense. Linear sites, due to their unique nature, preclude the easy ability of assessing the entire system, especially when an undertaking may intersect only a small portion of a multi-mile long property. It is still possible to define the essential physical features of a linear site from 1) previous recordings (if any exist), 2) historical documentation, and 3) visual inspection within and outside the Area of Potential Effects. While undertakings generally only provide a snapshot of an entire linear site, it is important to think about, and assess for, the entire system with all due diligence. Generally, most linear features have been at least partially recorded in the State of Utah, and these recordings should contain some information to allow agencies informed decisions on the overall system.

The one unifying aspect of linear sites is that they allowed the transmission or passage of something, whether water, electricity, communications, or humans. Thus, the most essential physical features of these sites would be how each site type allowed transit of the associated use. Each linear site type (road, railroad, canal, ditch, telephone/telegraph line, power line, trails, etc.) will have essential characteristics different than the other site types

(head gates in a canal system versus trestles for a railroad) and need to be viewed contextually. Within each site type, there will be further differentiation on a specific property's defining characteristics. For instance, the Willard Canal, a 1950s construction in the Weber Basin will have differing physical characteristics than the 1860s New Harmony canal system in southern Utah. These characteristics will be reflective of the temporal period of significance through the technology and engineering used, and available, at the time of construction. Identifying these essential physical features is of paramount concern. Making this assessment difficult is the fact that the linear feature itself is perhaps the most visible feature, whether it be an open-faced earthen canal, a raised railroad berm, or trail ruts and swales.

As all historic properties are actively constructed cultural manifestations, many have been altered over the course of its history, in both minor and major ways. This is why it is such an important step to define the property's period of significance and its essential physical characteristics before determination of effect. For instance, if the historic dirt road connecting the mines of Mammoth and Eureka in Juab County is considered for eligibility, the first question is whether it retains its period of significance (in this case example 1865-1930s). Inspection of historic maps, newspaper articles and photographs illustrates that the road does retain its original course (integrity of location) still connects to the active and inactive mine workings of both communities (integrity of association). But as it has been widened and paved in the 1970s (loss of integrity of materials and design), the site is likely not eligible for the NRHP. However, if the road had been re-graded and slightly widened in the 1920s to accommodate automobile traffic, but still retained integrity under location, setting, feeling, and association, with only minor changes to integrity of workmanship, materials, and design, then the property would still likely be eligible to the NRHP as the modifications were within the period of significance and did not significantly alter the site's integrity.

Defining the period of significance and essential physical features is particularly important when assessing proposals to modify or maintain historic linear site properties. For instance, dredging of a historic earthen canal for routine maintenance is likely not an adverse effect, as this would have occurred during the historic period (as long as the modern technology employed to complete the dredging does not alter the physical characteristics beyond historic integrity). Another example could be the re-paving of a historic segment of the Victory Highway. In-use sections of the Victory Highway have likely been re-paved dozens of times during the period of significance and further paving might not have an adverse effect. However, if the proposed paving also widens the road significantly, then there could be an adverse effect to the essential physical characteristics.

Perhaps one of the most common means of agencies and proponents circumventing an adverse effect determination is the use of "contributing" versus "non-contributing" segments of a linear site. These terms are brought, whether properly or improperly, over

from guidance regarding National Register Historic Districts. In this context, nominators identify those buildings, sites, structures or objects, within a historic district that add to the historical significance of an area (contributing) or those features that do not (non-contributing). In principle, this concept can be applied though the mechanisms are not as clearly outlined given that most linear sites are recorded as sites, not as official districts. For instance, some agencies contend that a 300' swath of a historic earthen canal that has been lined with concrete and structural elements removed or replaced outside the period of significance does not retain integrity, and thus this segment does not contribute to the overall integrity of the property. Use of contributing and non-contributing language presents several difficulties beyond the bureaucratic use in historic districts, but also how many non-contributing sections of a linear site is actually evidence of an overall lack of integrity for the entire system. Further, given the nature of most undertakings intersecting only small portions of large linear sites, it is nearly impossible to adequately determine whether the contributing/non-contributing argument has merit in relation to the whole system.

Overall, when assessing the effect of a proposed undertaking on a linear site, it is first necessary to define the areas of significance (Criteria A, B, C, or D), the period of significance, and identification of the essential physical features. If the proposed undertaking will affect even a small portion of the essential physical features, then there is likely a need to discuss the potential for adverse effects. There is no rubric for how much of a linear site needs to be affected to be considered an adverse effect; it's purely a contextual discussion based on the above-referenced integrity and significance issues in opposition to the proposed action. The following is a breakdown of common linear site issues by site type for further specific guidance.

### III. Resource-Specific Effects

#### a. Canals/Ditches

##### Piping:

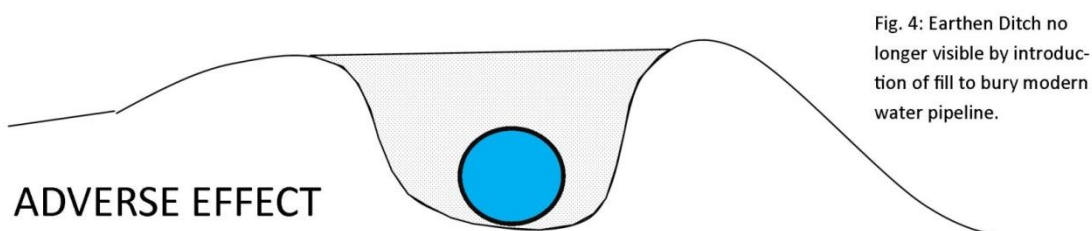
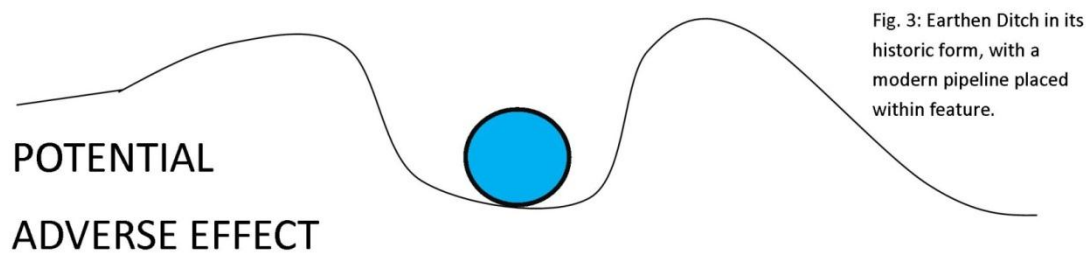
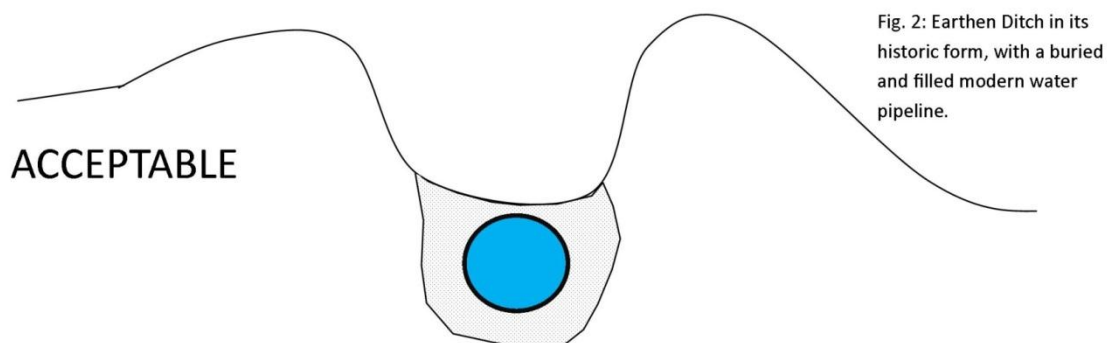
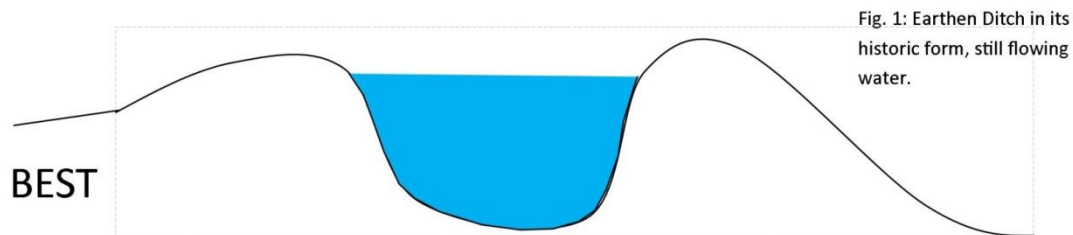
- 1) Subterranean Pipeline: Installation of a subterranean pipeline within an earthen canal/ditch, without permanently altering the shape, form, and design of said canal is generally accepted as a "No Adverse Effect" determination. While a piped earthen canal may not flow water in the same manner as historically, an analogy could be the eligibility of a house that is abandoned. While the primary function of the house was for sheltering human occupants, the abandonment of the home does not constitute a change in its eligibility. In the same way, canals served as a water delivery method to satisfy agricultural and residential needs, but abandonment (either through alteration of water conveyance method (piping versus free-flowing) or through disuse in general) does not automatically preclude its eligibility. More specifically, a new subterranean pipeline continues this historic process of water delivery within the canal/ditch corridor, thus continuing that historic use. A "No

Adverse Effect” determination applies ONLY if the feature is not significantly modified in physical appearance by installation of a pipeline.

The widening/narrowing/filling of a feature beyond its historical scope to accommodate a small/large diameter pipe could be considered an adverse effect. In cases of a concrete-lined canal, the disturbance of the lining for installation of a subterranean pipeline is likely an adverse effect.

- 2) Surface (insert or lay-down) Pipeline: In many cases, proponents and agencies install pipe within the earthen or concrete canal/ditch as a means of avoiding of adverse effect. This discussion only covers pipe that is placed within the canal/ditch without any significant ground disturbance or the introduction of fill to cover said pipe. Installation of a pipeline within the linear feature, in cases where it does not physically alter the shape, form, and design of canal has generally been accepted as a “No Adverse Effect”. In addition, a surface pipeline has the added ability to be removed and restore the feature to its original condition. A surface pipeline installation does have the potential to adversely affect the feature’s visual qualities, particularly the integrity considerations of feeling, setting, and design. Care must be taken to assess the potential for effects for each individual historic property.

## Piping Illustrations



Lining:

- 1) Replacement: In the instances where an existing historic lining, whether concrete or plastic is being replaced in-kind, the undertaking likely reflects a “No Adverse Effect” determination. It is important to consult with the Utah SHPO to determine what actually constitutes an ‘in-kind’ replacement of historic lining. For instance, the technology employed for pouring and forming during the original installation, and the resultant visual appearance of historic concrete is potentially significantly different than modern applications.

Historic lining should be as closely mimicked as possible to avoid altering the historic properties’ physical appearance, thus the integrity considerations of design and feeling. Connected actions to a re-lining undertaking such as the removal of contributing canal/ditch features (e.g. head gates, diversions, take-outs, bridges, culverts, etc.) could be considered an “Adverse Effect”; thus it is important to analyze all aspects of the proposed action.

- 2) New Installation: Installation of a concrete lining into a contributing portion of a previously earthen canal/ditch historic property should almost always result in an “Adverse Effect” determination. Lining of a previously earthen feature adversely affects the integrity of materials and design, and potentially affects its feeling, workmanship, and association. Use of different lining material, such as heavy duty plastics should also likely result in an “Adverse Effect” determination. Only one exception could be made for an “Adverse Effect” determination for new lining, and relates to the extension/expansion of a pre-existing lining.

In many cases, road crossings resulted in the installation of linings associated with culverts or abutments before advent of the National Historic Preservation Act and Section 106 Review Process. In addition, private individuals and organizations such as a Water Conservation District, which are not responsible under Section 106 might have installed a lining without consultation. If an undertaking is proposing to expand a pre-existing lining, and the new disturbance is small in scope, there is a potential to avoid an “Adverse Effect” determination. However, it is likely necessary to assess the overall integrity of the linear system to adequately determine the cumulative effects of this action.



Utah State History photograph collection, Utah Writer's Project, Photo Number 3394.

Some canals and ditches were constructed with concrete lining, while others had a concrete lining added during the historic period. The photo on the left, for example, is the construction of the Brigham Canal in 1935 with a concrete lining. Understanding the historic context of the canal, its construction design and modification will help with effects determinations.

#### Filling:

- 1) **New Filling:** New proposals to fill in lengths of linear canals/ditches should likely always result in an “Adverse Effect” determination, as the undertaking will significantly alter the physical appearance of the historic property. The filling of a water conveyance feature will adversely affect several aspects of integrity most prominently the design, feeling, association, and workmanship. Most importantly, filling will effectively erase this historic feature and has the potential to affect the integrity of an entire historic landscape and associated properties. There is no current rubric for how much filling activity will adversely affect the integrity of a historic property either in a linear foot or a percentage of the overall system, thus proponents need to consult with the Utah SHPO to discuss their undertaking and potential to effect.
- 2) **Expansion of Pre-Existing Filling:** Only one exception could be made for an “Adverse Effect” determination for the filling of a historic canal/ditch, and relates to the extension/expansion of a pre-existing disturbance. In many cases, road crossings or building constructions resulted in the filling of portions of a canal/ditch before advent of the National Historic Preservation Act and Section 106 Review Process. In addition, private individuals and organizations such as a Water Conservation District that are not responsible under the Section 106, might have filled in these features without consultation. If an undertaking is proposing to expand a pre-existing filled portion of a canal/ditch, and the new disturbance is small in scope, there is a potential to avoid an “Adverse Effect” determination. However, it is likely necessary to assess the overall integrity of the linear system to adequately determine the cumulative effects of this action. If the expansion of fill is small in scope, does not tip the scale of a cumulative effect determination, and does not result in any burying of contributing historic features (e.g. head gates, culverts, etc.), then perhaps a “No Adverse Effect” determination is appropriate.

Cross-Cutting:

- 1) Under: Perhaps one of the most common means of running pipeline past a historic linear feature, whether a canal/ditch, road/railroad, or historic trail, is the use of boring technology. In this instance, heavy equipment directionally bore the pipeline/conduit underneath a pre-existing feature without ever disturbing any portion of the historic property. This is the most Utah SHPO supported form of avoiding adverse effects for installation of pipelines or conduits, and should be the first option weighed by project proponents. Boring underneath historic linear features should almost always be determined a “No Adverse Effect” or perhaps even “No Historic Properties Affected”.
- 2) Over: A common undertaking that involves historic canals/ditches is the crossing over of these features by a variety of different methods including pipelines, bridges, roads, and power lines. Generally, if the proposed undertaking does not physically affect any portion of the linear feature, it is likely a “No Adverse Effect” determination. For most canals/ditches the historical setting and purposes included bridge and road crossings and other forms of development associated with opening up a new area for settlement through irrigation. However, this should always be analyzed for overall and cumulative effects to the ability of the feature to convey its historical significance. Another question for the proponent and agency is what other types of crossings (modern or historic) currently exist for the canal/ditch? Undertakings that cover a significant portion of a ditch/canal with bridges, roads, or other disturbances is visually obscuring the feature as much as filling in with soil and would lead potentially to an “Adverse Effect” determination. Effort should be focused on constructing crossings that are at least compatible with the historical setting, or designing a non-permanent solution (something that can be removed without affecting the canal/ditch at a later date). Generally, power lines, cell phone towers, or other undertakings with a potential adverse visual effect to historic properties should not affect canals/ditches.
- 3) Through: Perhaps the least common method for running pipeline or conduit through linear features is cutting directly through a ditch/canal through its side-walls and berms and burying beneath the historic bottom of feature. This should be the last option vetted for such an undertaking, and might lead to an “Adverse Effect” undertaking if care is not given to the preservation of the historic properties integrity. Trenching heavy equipment might cut a swath several feet wide through a canal/ditch in order to lay a pipeline/conduit. While boring under the feature would be the preferred option, Utah SHPO understands that this could be a cost-prohibitive process for some undertakings.

Cutting through an historic earthen canal poses some relatively easy repairs to avoid an “Adverse Effect” determination. If the proponent re-contours the side walls and berm of the earthen canal/ditch after trenching without permanently affecting its form, design, or shape, then “No Adverse Effect” seems an appropriate determination. However, if the trenching is to disturb contributing historic lining or features then a different assessment will need to be made in regards to effects. Any proposed bridges or other types of crossings that will require construction of abutments, wing-walls, or stanchions within the side wall or berm of the canal, thus directly affecting the feature’s integrity, likely should be an “Adverse Effect” determination, as the disturbance is permanently altering several aspects of integrity. Again, these types of disturbances are contextual and will require the proponent and the responsible agency to determine if the disturbance is an adverse effect given the size of the canal/ditch, any associated features that might be affected, if the segment is contributing to the overall eligibility, or other factors.

#### Feature Replacement and/or Installation

- 1) Replacement: Canals and ditches are a mixture replacement of features within a historic property needs to first be analyzed through a lens of contributing, non-contributing, and out-of-period, similar to buildings in a historic neighborhood. The eligibility determination of the historic property should delineate the period of significance, of which all further discussions should follow. Contributing features would be those head gates, diversions, pump stations, or other structural elements that were constructed within the period of significance and retain integrity. Non-contributing elements could be those features that were constructed during the period of significance but have been significantly altered, or were not critical to the operation of the linear feature. Finally, out-of-period features are those elements of a canal/ditch that were constructed, generally after, the period of significance.

Removal or replacement of non-contributing or out-of-period structural elements of a canal/ditch should likely yield a “No Adverse Effect” determination. On the other hand, replacement, removal, or modification of contributing elements might be an “Adverse Effect”, if the undertaking changes the ability of the canal/ditch and features to convey overall significance. Thus, replacement of a single head gate might not be an “Adverse Effect” by itself, but if there are only a handful of other remaining contributing head gates and the undertaking would further remove these examples, then it is likely a cumulative “Adverse Effect”.

- 2) Installation: Installation of new features, without replacement, does not necessarily reflect an automatic adverse effect determination. In many instances the installation of new features compatible with the site’s original usage might actually enhance, or continue, the aspects of historical integrity that make the site

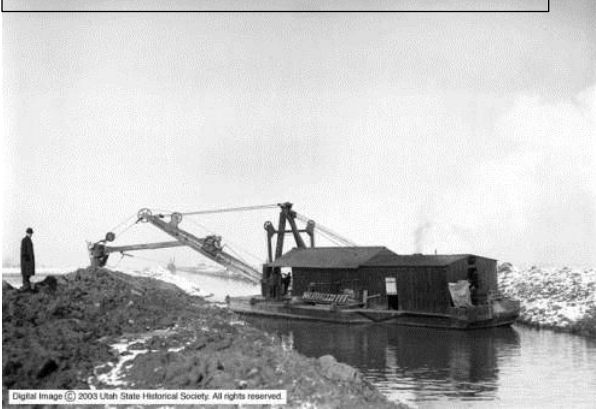
significance. For instance, constructing a new culvert under a historic road to prevent damage through flooding and blow-outs could be a positive effect for the long-term integrity of the historic property. This is dependent, of course, if the new construction is in-keeping with the historic nature of the site and meets the Secretary of Interior Standards. For example, efforts to install new culverts on a historic dirt road with existing stone culverts could avoid an adverse effect determination by use of a stone façade similar to the historic example to cover the modern steel culvert installation under the road bed. Similar to most other linear sites issues, installation of new features warrants careful consideration and discussions with UTSHP staff.

#### Maintenance

- 1) Dredging: Both earthen and concrete-lined canals/ditches require periodic removal of organic and non-organic material that flows or is intentionally dumped into the linear feature. In the case of concrete-lined canals, there is rarely an issue with this type of routine maintenance. Similarly, the use of a dredging operation in an earthen canal is in keeping with the historic maintenance activities of that feature, as long as the activity does not significantly alter the historic nature of the property. For instance, if dredging activity, with modern technology, significantly alters the width of the feature beyond its design during the period of significance, then there might be a need for determination of adverse effect. Regardless, most dredging activity will not adversely affect the essential physical characteristics of a canal or ditch. Beyond dredging and breaches, canals and ditches require routine maintenance to remove debris captured in spillways, take-outs, and debris captures. General cleaning of this material without directly affecting any physical features is not normally considered an adverse effect.
- 2) Blow-Outs/Breaches: In cases where there is a breach of an earthen canal, an adverse effect has already occurred by its nature. Stabilization of a breached berm, and subsequent reconstruction, if accomplished in a historically compatible fashion in keeping with the Secretary of Interior Standards, should not be commonly determined an adverse effect. If the breached berm, after repair, was repaired with the same materials, maintaining the same shape, form, and design, then the segment will likely retain integrity. In opposition, however, if an earthen berm is breached and repaired with poured concrete (which would not be advisable given the potential side-effects of such installation to the overall structural integrity of a system), then the essential physical features of the site (an earthen berm) will have been significantly affected by this undertaking.
- 3) Repairs: Canals/ditches will always require repairs of many of the physical features of the linear site in addition to the routine cleaning/dredging activity or the

emergency repair of breaches. Repair activity could include maintenance of head gates and apparatus, take-outs, diversions, and any bridge or pipeline abutments that intersect the linear site. Repair of physical features that date to the period of significance should be carefully vetted for determinations of effect. While replacement of screws, bolts or application of grease to a 1870s head gate are necessary, care must be taken not to adversely affect the integrity by introducing components that are not compatible with the historic nature of the feature. Generally, routine repairs of historic features of a canal or ditch will not be an adverse effect unless the proposed action alters the integrity of the feature and its ability to convey the period of significance.

Utah State History, Salt Lake City Engineers Photographic Collection, Mss C 601, Photo number 00004.



Periodic dredging of canals is a facet of the historical maintenance of all ditches and canals, and should rarely be considered an adverse effect, and should not be considered an activity that destroyed integrity historically. Dredging is a necessary part of canal and ditch maintenance, such as this 1916 barge and steam shovel work on the Surplus Canal in Salt Lake County.

## **Appendix D: Historic Building Form**

Form and other information is available here: <http://heritage.utah.gov/history/building-surveys>

# HISTORIC SITE FORM

(10-91)

UTAH STATE HISTORIC PRESERVATION OFFICE

## 1 IDENTIFICATION

Name of Property:

Address:

Township

Range

Section:

City, County:

UTM:

Current Owner Name:

USGS Map Name & Date:

Current Owner Address:

Tax Number:

Legal Description (include acreage):

## 2 STATUS/USE

Property Category

Evaluation

Use

\_\_building(s)

\_\_eligible/contributing

Original Use:

\_\_structure

\_\_ineligible/non-contributing

Current Use:

\_\_site

\_\_out-of-period

\_\_object

## 3 DOCUMENTATION

Photos: Dates

Research Sources (check all sources consulted, whether useful or not)

\_\_slides:

\_\_abstract of title

\_\_city/county histories

\_\_prints:

\_\_tax card & photo

\_\_personal interviews

\_\_historic:

\_\_building permit

\_\_USHS Library

\_\_sewer permit

\_\_USHS Preservation Files

Drawings and Plans

\_\_Sanborn Maps

\_\_USHS Architects File

\_\_measured floor plans

\_\_obituary index

\_\_LDS Family History Library

\_\_site sketch map

\_\_city directories/gazetteers

\_\_local library:

\_\_Historic American Bldg. Survey

\_\_census records

\_\_university library(ies):

\_\_original plans available at:

\_\_biographical encyclopedias

\_\_other:

\_\_newspapers

Bibliographical References (books, articles, interviews, etc.)

Attach copies of all research notes, title searches, obituaries, and so forth.

Researcher/Organization:

Date:

#### 4 ARCHITECTURAL DESCRIPTION

Building Style/Type: \_\_\_\_\_ No. Stories: \_\_\_\_\_  
 Foundation Material: \_\_\_\_\_ Wall Material(s): \_\_\_\_\_  
 Additions: none minor major (describe below) Alterations: none minor major (describe below)  
 Number of associated outbuildings \_\_\_\_\_ and/or structures \_\_\_\_\_.  
 Briefly describe the principal building, additions or alterations and their dates, and associated outbuildings and structures.  
 Use continuation sheets as necessary.

#### 5 HISTORY

Architect/Builder: \_\_\_\_\_ Date of Construction: \_\_\_\_\_

Historic Themes: Mark themes related to this property with "S" or "C" (S = significant, C = contributing).  
 (see instructions for details)

<input type="checkbox"/> Agriculture	<input type="checkbox"/> Economics	<input type="checkbox"/> Industry	<input type="checkbox"/> Politics/ Government
<input type="checkbox"/> Architecture	<input type="checkbox"/> Education	<input type="checkbox"/> Invention	<input type="checkbox"/> Religion
<input type="checkbox"/> Archeology	<input type="checkbox"/> Engineering	<input type="checkbox"/> Landscape	<input type="checkbox"/> Science
<input type="checkbox"/> Art	<input type="checkbox"/> Entertainment/ Recreation	<input type="checkbox"/> Architecture	<input type="checkbox"/> Social History
<input type="checkbox"/> Commerce	<input type="checkbox"/> Ethnic Heritage	<input type="checkbox"/> Law	<input type="checkbox"/> Transportation
<input type="checkbox"/> Communications	<input type="checkbox"/> Exploration/ Settlement	<input type="checkbox"/> Literature	<input type="checkbox"/> Other
<input type="checkbox"/> Community Planning & Development	<input type="checkbox"/> Health/Medicine	<input type="checkbox"/> Maritime History	
<input type="checkbox"/> Conservation		<input type="checkbox"/> Military	
		<input type="checkbox"/> Performing Arts	

Write a chronological history of the property, focusing primarily on the original or principal owners & significant events.  
 Explain and justify any significant themes marked above. Use continuation sheets as necessary.

## **Appendix E: Negative Report Form**



### Short Cultural Resources Inventory Report Form

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**State Project Number:** [Click here to enter text.](#)

**Report Title:** [Click here to enter text.](#)

**Report Date:** [Click here to enter text.](#)

**Report Author(s):** [Click here to enter text.](#)

**Principal Investigator:** [Click here to enter text.](#)

**Person-Days for Survey:** [Click here to enter text.](#)

**Acreage:** APE: [Click here to enter text.](#)

Intensive: [Click here to enter text.](#)

Recon/Intuitive: [Click here to enter text.](#)

---

**Project Background:**

[Click here to enter text.](#)

**Area of Potential Effect Definition:**

[Click here to enter text.](#)

**Identification Strategies (archaeological, historical, and ethnographic):**

[Click here to enter text.](#)

**Location(s) and Date(s) of Pre-Field Records Search:**

1. Utah Division of State History: [Click here to enter text.](#)
2. Federal/State Office: [Click here to enter text.](#)
3. Historic Records/Maps: [Click here to enter text.](#)
4. Other: [Click here to enter text.](#)

**Results of Pre-Field Records Search (sites & projects within agency-defined APE buffer and/or site leads from research):**

[Click here to enter text.](#)

**Date(s) of Survey:** [Click here to enter text.](#)

**Description of Findings:** [Click here to enter text.](#)

**Conclusion & Management Recommendations:** [Click here to enter text.](#)

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**Required Materials:**

- ☐ 7.5' Quadrangle Base map(s) for Project Area
- ☐ 7.5' Quadrangle Base map (s) for Surveyed Area (if different than #1)

## **Negative Report Form Instructions**

The Utah State Historic Preservation Office is pleased to provide a fillable pdf report form to be used by agencies and archaeological consultants to streamline report submission for Class II – Reconnaissance level Field Survey and Class III - Intensive Pedestrian Survey. Over the last several years it was clear that much of the text included in reports submitted to UTSHP was unnecessary or redundant, and provided little or no value to compliance with Section 106 of the National Historic Preservation Act or Utah Code 9-8-404. The provided form focuses consultants and agencies to provide clear and concise information on project background, definition of Area of Potential Effects (APE), identification strategies, and findings. Removed from this form are lengthy cultural or historical contexts and backgrounds that are not necessary for negative reports and without a research design rarely provide any usefulness to the review or management of cultural resources. These instructions are provided to assist in the accurate and consistent completion of the Negative Report Form.

**State Project No.:** This is a number received from UDSH staff upon request from a State Permitted archaeologist, only. The number will appear as a string of numbers and letters, such as “U13UD0233”, and include the suffix codes for landownership, (ex. s=state, b=blm, t=tribal, p=private, etc.)

**Report Title:** While this may be different than the name of project provided to UDSH to receive a State Project Number, this should be as accurate and unique as possible and include the County or Counties.

**Report Date:** Date of completion for the report, in the following format mm/dd/yyyy.

**Report Author(s):** List all authors of the report, preferred format is “First Name Last Name”

**Principal Investigator:** Provide the name of the Utah State Permit holder overseeing the project.

**Survey Crew:** Provide the number of individuals involved in survey, by person-days.

**Project Background:** Provide a summary of the project including, but not limited to, the proponent, purpose and need, type of activity, land ownership, and any other pertinent information.

**Area of Potential Effect (APE) Definition:** Per both state and federal cultural resource regulations, agencies must provide a definition of the APE which is defined in 36CFR800.16(d) as “geographic area or areas within which an area may directly or indirectly cause alterations to historic properties....and may be different for different kinds of effects caused by the undertaking”. For example, a water pipeline may be limited to the ground disturbance as APE, while a proposed camp ground may include a larger APE to cover additional ground disturbance and potential indirect effects.

**Identification Strategies (archaeological, historical, and ethnographic):** Pursuant to 36CFR800.4, the first step in identification strategies is to complete a review of existing information for the APE. You will detail the results of this pre-field literature review in the following section, but mention those efforts here including not only archaeological records, but tribal consultation, ethnographic studies, historical societies, informants, pertinent articles, books, theses, dissertations, websites or other publically

available research that are either relevant to the proposed project area or relevant to known resources within the area.

The next part of the identification strategy will be the actual field survey. Provide detail on the nature of the inventory, how many individuals; transect spacing, discussions of exempted areas and rationale for exemption, ground visibility, and all another other factors affecting the identification strategies. In Utah, most archaeological identification strategy for in-field survey follows the Bureau of Land Management 8110 Handbook for Identifying Cultural Resources. Alteration of these standardized methods should be discussed through consultation between the federal or state agency and the UTSHPO.

**Location(s) and Date(s) of Pre-field Search:**

1. **Utah Division of State History:** List the date(s) you completed a literature review of records held by the Utah Division of State History Archaeological Records Office and/or Preservation Pro
2. **Federal/State Office:** Identify any additional literature reviews completed at agency offices, providing specific locations and dates.
3. **Historic Records/Maps:** Provide detail on review of historic maps, Master Title Plats, texts, or oral histories to help identify historic properties. Provide specific details on the year of map, etc.
4. **Other:** If there are any other pre-field records search not included above, detail that information in this location.

**Results of Pre-Field Records Search:** Provide a list of cultural resources sites and inventories within .5 mile of the APE (unless instructed otherwise by the agency), and a list of any site leads yielded from pre-field prehistoric and historic map or literature reviews.

**Date(s) of Survey:** Provide the dates of survey for the project.

**Description of Findings:** In narrative format provide a description of the negative findings as they relate to the literature search and expectations. If isolated occurrences are found please provide a summary of the findings.

**Conclusion & Management Recommendations:** Provide a summary of the project, the results of identification. Formal determinations of eligibility and effect are not included in this section; those are found in the letter from the Agency Official.

**Required Materials**

1. **Utah SHPO Cover Page**
2. **7.5' Quadrangle Base Map(s) for Project Area**  
Map should depict the extent of the Area of Potential Effects, regardless of type of inventory conducted.
3. **7.5' Quadrangle Base Map (s) for Survey Area (if different than #1)**  
Map should depict exact areas of Class II and/or Class III inventories, and for Class II it is suggested to display location of survey transects.

## **Appendix F: Linear Sites Guidelines**

**Please find these guidelines at the following link:**

**<http://www.upaonline.org/files/UPACLinearGuidance2008.pdf>**